

YEAR 2 UNIT 3: Mini Worlds (Living things and their habitats)

Enquiry Question: What are the similarities and differences between animals?

Related units: Year 1, Unit 5: On Safari; Year 1, Unit 2: Living Things
Year 4 Unit 2: Living things and their habitats – How are animals grouped

Unit overview

National Curriculum Link Year 2: Living things and their habitats

Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Identify and name a variety of plants and animals in their habitats, including microhabitats. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. Pupils learn that all living things have certain characteristics that are essential for keeping them alive and healthy. Pupils learn what a habitat and microhabitat is.

Scientific vocabulary

- Habitat
- invertebrate
- lens
- magnifying glass
- microhabitat
- microscope
- organism
- predator
- prey
- reproduce
- producers
- observe

Activities and working scientifically learning outcomes

Mini Worlds Film

Identifying and classifying.

Invertebrates

Gathering and recording data to help in answering questions.

Using hand lenses and microscopes

Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment, performing simple tests.

Assessment (Expectations)

1. Name two things that are alive, once lived and have never been alive.
2. Name three animals or plants, what their habitat is and give reasons why they are suited to it.
3. Describe how animals obtain their food from plants and other animals.
4. Explain what a food chain is and give an example of a chain with three parts.

Cross-curricular links

Writing opportunities:

- Writing down ideas and/or key words, including new vocabulary, to describe and explain observations.
- Use present and past tenses correctly and consistently, e.g. 'I looked at the bee's wing.'

Teacher knowledge

This topic provides the opportunity for children to explore the exciting world of things that cannot be seen with the naked eye.

In order for something to be classified as alive, there are certain things that it needs to do. At Year 2 this must be communicated in simple terms, as it can be a difficult concept to grasp.

Basically, living things are able to move, breathe, grow, have babies, get rid of waste (in humans, 'wee' and 'poo') and eat. They also need to be able to know when something changes, e.g. gets colder, warmer (sensitivity). These ideas are more difficult to understand with plants, because we cannot see them move, breathe, get rid of waste or make their own food. It is much easier for children to recognise these things in themselves, their pets and animals in the locality. A habitat is a place where a plant or animal lives.

Plants and animals have basic needs in order to live, called life processes. They need to be able to breathe, move, grow, eat, go to the toilet and have babies. For an animal or plant to survive in a habitat, the habitat has to provide some of those. If children understand the scientific term 'habitat', it becomes easier to understand 'microhabitat'. A microhabitat is simply a very small habitat (a small area of a larger habitat). For example, a leaf could be a microhabitat of a hedgerow. All living things need energy to live.

Humans and other animals get their energy from the food they eat. Children will find this idea easy to understand, even for snails, slugs and worms; but what they find more difficult is how plants make their own food. Plants are producers, meaning that they produce their own food. In the case of plants, they use sunlight (photosynthesis) to create energy. Telling children that plants make their own food using the sun is the easiest approach, rather than trying to explain photosynthesis which is not tackled until end of Key Stage 2 and beginning of Key Stage 3. Live invertebrates can be viewed under a microscope if they are placed in a petri dish and not subjected to heat from the light for too long.

Misconceptions

- Children may think they are not animals – in fact, humans are mammals and very much part of the animal kingdom.
- They may not think that plants are 'alive' – in fact, plants are alive as they display the characteristics of living things, e.g. moving, reproducing, growing.

Resources

BBC Bitesize – habitats - <https://www.bbc.co.uk/bitesize/topics/zx882hv>

Royal Microscopical Society www.rms.org.uk